

Assessment of Bottomfish Density and Diversity within Potential Marine Reserves in Skagit County, Washington

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Continuous human demand for Puget Sound's marine resources has negatively affected the biological richness of this ecosystem. In order to help maintain sustainable fisheries and a viable ecosystem, the Skagit County Marine Resources Committee is in the process of promoting no-take marine reserves to protect territorial, long lived, and slow to mature rocky reef bottomfish (especially rockfish, *Sebastes* spp.) from over harvesting. The objective of this study was to estimate current bottomfish densities, fish sizes, and document habitat complexity and species composition within eight candidate rocky reef reserve sites. In addition, local change in bottomfish density and diversity was described by replicating Lawrence Moulton's 1977 rocky nearshore SCUBA surveys within the proposed Allen Island reserve site. Data were collected using visual band transect SCUBA surveys and ROV cruises. The results of these baseline surveys will help identify the best potential marine reserve areas, but implementation of enforced marine reserves depends upon the decisions of the resource co-managers (WDFW and Treaty Tribes). A marine reserve network within Skagit County has the potential to improve bottomfish stocks and local biodiversity, while functioning as a model process for future reserve implementation in Puget Sound and other temperate rocky reef marine habitats along the west coast.